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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/856,513	06/15/2001	Hwee Hwa Pang	P17529	5665
7055	7590	01/12/2006	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			RAMPURIA, SATISH	
			ART UNIT	PAPER NUMBER
			2191	

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/856,513	<b>Applicant(s)</b> PANG ET AL.	
	<b>Examiner</b> Satish S. Rampuria	<b>Art Unit</b> 2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 53-82 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 53-82 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendment***

1. This action is in response to the RCE received on Oct. 21, 2005.
2. The objection to specification due to arrangement of application is withdrawn in view of applicant's amendment.
3. Claims cancelled by the applicant: None.
4. Claims amended by the applicant: 53-55, 61, 67-69, 72, 73, 75 and 79-82
5. Claims pending in the application: 53-82.

***Response to Arguments***

6. Applicant's arguments with respect to claims have been considered but they are not persuasive.

In the remarks, the applicant has argued that:

- (i) Applicants respectfully submit that White fails to disclose or suggest evolving or modifying a process by selective deletion, addition or replacement of execution states with the process, thereby changing the functionality of the process, as recited in independent claims 53 and 79 (Remarks, page 16).
- (ii) Applicants respectfully submit that White also fails to disclose or suggest evolving or modifying a process by at least one of selective deletion, addition, or replacement of objects from within the process, thereby changing the functionality of the process, prior to the process resuming operation on a second operating environment, as recited in independent claims 81 and 82 (Remarks, page 16).

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Examiner's response:

- (i) In response to Applicants argument, the limitation recited in amended claim 53 and 79. White et al. fails to teach or suggest evolving or modifying a process by selective deletion, addition or replacement or execution states within the process, thereby changing the functionality or the process, as recited in independent claims 53 and 79. As noted by the Applicants in the Remarks pg. 15 that White et al. does disclose the execution states and during the transport of a computer process, the execution state of the computer process is preserved, once the process is done the computer process are executed by the destination computer system to perform complex operations, including defining, creating and manipulating (deleting, addition or replacement) data objects and interacting with other computer processes executed by the destination computer system. Thus, White et al. does disclose the claimed limitations. Further, Applicants, submit that Examiner has not cited any portion of White et al. which discloses that the agent is evolved to change its functionality, prior to resuming execution. In the response, Examiner would like Applicants to direct to page 4 of the Office Action mailed on 4/21/05. Examiner clearly pointed out where these limitations are taught by White et al. i.e. col. 8, lines 17-22. Furthermore, Applicants alleges that during ther interview (8/16/05), Examiner was not able clearly point out the limitations above. However, Examiner did point out where the limitation are taught by White. Applicants only make general allegations. Therefore, the rejection is proper and maintained herein.

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- (ii) In response to Applicants argument, the limitations recited in claims 81 and 82 are similar to those recited in claim 53, thus same reason applied as set forth (see response to claim 53) in connection with claim 53. Further, White does disclose the processing resumes of execution state (see the rejection below). Applicant only makes general allegations. Therefore, the rejection is proper and maintained herein.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 53-82 rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,603,031 to White et al., hereinafter called White.

**Per claims 53, 80, and 81:**

White discloses:

- A computing environment having a plurality of operating environments (col. 7, lines 53-54 “Two or more engines are interconnected to form a network”), each of the operating environments being suitable for running a process which comprises of plurality of objects each comprising data and program modules operating on the data (col. 7, lines 36-37 “Each engine in the distributed computer system interprets the instructions that define the process uniformly” and col. 8, lines 17-22 “The instructions... executed... to perform... operations... creating and manipulating data objects... by destination computer system”),

and which has an execution state at any time (col. 7, line 67 to col. 8, line 1 “process is suspended and the execution state... preserved”) the computing environment supporting:

- transmittal of a process running on any first one of the operating environments to any second one of the operating environments to resume running on the second operating environment (col. 7, lines 66-67 to col. 8, line 1 “To transport a particular computer process, the computer process is suspended and the execution state of the computer process is preserved” and col. 63-64, lines 65-67 and 1-5 “petition expires... resumes... processing transfers... expiration of petition”), and at least one of
- evolution of the process by selective deletion of execution states and at least one of part of the data and program modules from within the process (col. 25, lines 23-25 “an equivalent interchangeable object is found within computer system 120B, object 140B can be deleted from computer system 120A”), selective addition of execution states and at least one of new data and/or program modules and into the process (col. 25, lines 30-32 “creating one or more clone processes of the agent and transporting each clone process to a respective place”), and selective replacement of execution states and at least one of part of the data and program modules within the process by corresponding new execution states and at least one of new data and program modules, thereby changing the functionality of the process (col. 8, lines 17-22 “The destination computer system resumes execution of the computer process... instructions of the computer process are executed by the destination computer system to perform complex operations, including defining, creating and manipulating data objects and interacting with other computer processes executed by the destination computer system”).

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**Per claim 74:**

The rejection of claim 53 is incorporated, and further, White discloses:

- wherein a said process may be transferred between different first and second hardware components of said computing environment (col. 7, lines 66-67 to col. 8, line 1 “To transport a particular computer process, the computer process is suspended and the execution state of the computer process is preserved”).

**Per claim 60:**

The rejection of claim 53 is incorporated, and further, White discloses:

- wherein a said evolutionary operation includes the incorporation into a first process of new objects from a second process (col. 10, lines 46-48 “If such an interchangeable object is found... which contains the second place, the interchangeable object is substituted for the interchangeable object, which was left behind at the first place”).

**Per claim 54, 61, 68, 75, and 76:**

The rejection of claim 53, 60, and 74 is incorporated, respectively, and further, White discloses:

- wherein a construct is formed comprising at least one of data and program modules (col. 10, lines 14-16) and execution state of a first process (col. 7, line 67), and wherein said evolutionary operations are performed by functions operating on a said construct (col. 8, lines 17-22).

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**Per claim 55, 62, and 69:**

The rejection of claim 54, 61, and 68 is incorporated, respectively and further, White discloses:

- wherein said construct is formed by a construct operation that suspends all active threads of said first process (col. 9, lines 47-48) and creates a new process comprising at least some of the at least one of data and program modules and execution state of said first process (col. 8, lines 17-22), and stores said new process in a data area of said first process (col. 2, lines 4-5).

**Per claim 56, 63, and 70:**

The rejection of claim 55, 62, and 69 is incorporated, respectively, and further, White discloses:

- wherein said construct comprises only data, program modules and execution state falling within lists that are passed to said construct operation (col. 9, lines 55-57 “the agent... place is formed from the standardized form, including the execution state represented in the standardized form”).

**Per claim 57 and 64:**

The rejection of claims 54 and 61 is incorporated, respectively, and further, White discloses:

- wherein said construct is provided with an authorizing signature (col. 12, lines 44-47 “method of establishing contact between two processes... a first process cannot obtain access to a second process without simultaneously granting to the second process access to the first process”).



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**Per claim 58:**

The rejection of claim 53 is incorporated, and further, White discloses:

- wherein said evolutionary operations include the selective deletion of objects from within said process (col. 25, lines 23-25 “an equivalent interchangeable object is found within computer system 120B, object 140B can be deleted from computer system 120A”).

**Per claim 59:**

The rejection of claim 53 is incorporated, and further, White discloses:

- wherein said evolutionary operations include the selective loading or reloading of objects into said process (col. 8, lines 34-37 “The agent class provides instructions which enable an agent to (i) examine and modify itself, (ii) transport itself from a first place process”).

**Per claim 65:**

The rejection of claim 61 is incorporated, and further, White discloses:

- wherein after said construct is transferred, the second process stored within said construct is caused to be activated within said first process (col. 7, lines 29-32 “A particular process that utilizes the set of computer instructions is activated by an engine that is executing within the distributed computer system”).

**Per claim 66 and 67:**

The rejection of claim 61 is incorporated, and further, White discloses:

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- wherein after said construct is transferred the first process is suspended and the second process stored within said construct is activated (col. 7, lines 29-32 “A particular process that utilizes the set of computer instructions is activated by an engine that is executing within the distributed computer system”), and when the second process is concluded, the data and program modules of the second process are added to the first process and the first process is reactivated (col. 8, lines 22-24 “As computer processes are uniformly interpreted throughout the network and are encoded and decoded for transport between computer systems”).

**Per claim 71:**

The rejection of claim 68 is incorporated, and further, White discloses:

- wherein said data and said program modules from said second process are copied into said first process (col. 8, lines 43-45 “An agent can contain information which is carried with the agent from the first place process to the second place process”).

**Per claim 72 and 73:**

The rejection of claim 60 is incorporated, and further, White discloses:

- wherein the event of a conflict between at least one of data and program modules of said first process and at least one of data and program modules of second process (col. 10, lines 42-45 “interchangeable objects in the computer system which contains the second place are examined to determine whether any of the interchangeable objects has a digest equal to the digest transported with the agent”), the at least one of data and program

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modules of said first process with override the at least one of data and program modules of said second process (col. 10, lines 50-64 "If such an interchangeable object is found... which contains the second place, the interchangeable object is substituted for the interchangeable object, which was left behind at the first place").

**Per claims 77 and 78:**

The rejection of claim 74 is incorporated, and further, White discloses:

- wherein a said process is subject to an evolutionary operation that allows the process to run in the second hardware component (col. 7, lines 41-45 and col. 8, lines 53-55 "The instructions... moved to and interpreted by a second engine, even if the first and second engines are executing within two separate computer systems whose operating systems and hardware are otherwise generally incompatible").

*Claims 79 and 82* are the method claim corresponding to system claim 1 and rejected under the same rationale set forth in connection with the rejection of claim 1 above.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Satish S. Rampuria** whose telephone number is **(571) 272-3732**. The examiner can normally be reached on **8:30 am to 5:00 pm** Monday to Friday except every other

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Friday and federal holidays. Any inquiry of a general nature or relating to the status of this application should be directed to the **TC 2100 Group receptionist: 571-272-2100**

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Wei Y. Zhen** can be reached on **(571) 272-3708**. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Art Unit 2191  
1/17/2006



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